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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,101	03/30/2004	Teruyoshi Takeuchi	3520.105	2733
59866	7590	12/05/2006	EXAMINER	
EDEL, SHAPIRO & FINNAN, LLC 1901 RESEARCH BLVD. SUITE 400 ROCKVILLE, MD 20850-3164			THOMAS, JAISON P	
			ART UNIT	PAPER NUMBER
			1751.	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/812,101	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Jaison P. Thomas	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/27/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 1-9 and 11-22 in the reply filed on 10/27/2006 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what measured value of the electroconductive resin must have a "coefficient of variation of standard deviation" of not more than 10 percent.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1,3,5,9,11,15,19,22 are rejected under 35 U.S.C. 102(b) as being anticipated by Minamisawa et al (US Patent 4500660).

Minamisawa et al. teaches an epoxy resin composition having excellent adhesive strength wherein the composition comprises a bisphenol A type epoxy resin, a novolak type epoxy resin, a glycidyl amine type epoxy resin, a reaction product between a acrylonitrile-butadiene copolymer and a glycidyl amine type epoxy, a nitrile rubber, curing agent and accelerator and a reinforcing fiber (Abstract). The nitrile rubber is defined as a copolymer of butadiene and acrylonitrile where in the rubber can have alpha or beta unsaturated carboxylic acids as a comonomers (which examiner construes as inherently creating a carboxyl-terminated acrylonitrile butadiene rubber) (Column 4, lines 56-60). The bisphenol A resin is a condensation product of bisphenol and epichlorohydrin (Column 2, lines 11-12). Reinforcing fibers that can be used include carbon fibers with sizes ranging from 1 to 100 mm (Column 6, lines 51-57). The composition is prepared by dissolving the epoxy resin composition discussed above in organic polar solvents such as acetone or cellosolve and then impregnating the fibers with the solution (Column 6, lines 61-67) and sheet-like prepreg materials can be formed from this resulting material (Column 6, line 68). One curing accelerator disclosed includes the formula of structure (V) and includes a tertiary amine when Z is substituted with $-\text{CH}_2\text{CH}_2\text{CN}$ (Column 5, lines 12-24).

With respect the volume resistivity limitation of Claim 19, the examiner respectfully submits that the prior art inherently meets the claimed limitation. Specifically, the reference teaches identical components and is produced in the same/similar manner and would inherently possess the volume resistivity.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2,4,6-8,12-14,16-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamisawa et al (US Patent 4500660).

Minamisawa et al. is relied upon as disclosed above. However, Minamisawa et al. does not disclose 1) the molecular weights of the acrylonitrile butadiene rubber, 2) weight percentage of the carbon fiber present in the composition, 3) an electroconductive sheet thickness of 1 mm.

With respect to 1) and 2), it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the molecular weights of the rubber and the weight percentage of the carbon fiber of Minamisawa through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

With respect to 3), It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose a sheet thickness 1 mm or less as an obvious design choice.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit: 1751

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Jaison Thomas
Examiner
11/2/2006

JT


Mark Kopec
Primary Examiner